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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,243	09/25/2003	Jong-Hoon Oh	2003P52609US/I331.110.101	8716

7590 03/09/2005

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EXAMINER

LUU, PHO M

ART UNIT PAPER NUMBER

2824

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/672,243

**Applicant(s)**

OH, JONG-HOON

**Examiner**

Pho M. Luu

**Art Unit**

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 is/are allowed.
- 6) ☒ Claim(s) 1,9,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-8,19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/25/03</u> | 6) <input checked="" type="checkbox"/> Other: <u>Search History</u>                    |

## **DETAILED ACTION**

### ***Reply to Election/Restrictions***

1. Applicant's election without traverse of Group I, Claims 1-12 and 17-20 filed 06 December 2004 is acknowledged. The changes and remarks disclosed therein were considered.
2. Claims 13-16 have been canceled.
3. Claims 1-12 and 17-20 are pending in the application.

### ***Specification***

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it uses the phrase "The present invention" in line 4, which is implied. Correction is required. See MPEP § 608.01(b).

***Information Disclosure Statement***

6. Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed 23 September 2003. The information disclosed therein was considered.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 9 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakagawa. (US. 2004/0027882).

Regarding claims 1 and 17, Nakagawa in Figures 4-5 discloses a random access memory device (10, Figure 4) assembled into a chip package including a refresh control circuit (11, Figure 4) comprising:

a first circuit (16, Figure 4) to receive a first refresh rate signal (16 receives the read (rd-cmd) signal in Figure 4) having a first refresh rate signal frequency (see column 3, paragraph 0050, lines 1-3) and produce a second refresh rate signal (16 receives the refresh request (ref-req) signal) having a second refresh rate signal frequency;(see column 3, paragraph 0050, lines 1-4) (also, see column 3, paragraph 0050, lines 1-11).

a second circuit (17, Figure 4) to receive the first refresh rate signal (17 receives the read (rd-cmd) signal in Figure 4) and the second refresh rate signal (17 receives the refresh request (ref-req) signal) and

a final fusing element (second refresh circuit 17 including fuse element such as delay circuit contain in circuit 17 shown in Figure 5) coupled to the second circuit (17, Figure 5) such that the final fusing element select a final refresh rate signal occurring after the dynamic memory storage system has been assembled into a chip package. To be more specific, the second refresh circuit 17 determined the read (rd-cmd), refresh (ref-req) and refresh timing (ref-judge) during the operation of DRAM device (also, see column 3, paragraph 0054 and paragraph 0055).

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With respected to claim 9, Nakagawa in Figure 5 disclosed the final fuse element (circuit 17 contain delay fuse as shown in Figure 5) selected the final refresh rate signal by electronic (inherence, the circuit device 10 supply the power in circuit) cut a fuse in the final fuse element after dram device is assembled into a chip package.

With respected to claim 18, Nakagawa in Figure 5 disclosed the first circuit (16, Figure 4) includes a frequency divider (inherence, the first refresh circuit 16 have the frequency apply through the circuit of the DRAM 10).

***Allowable Subject Matter***

9. Claims 2-8 and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record does not disclose or suggest a multitude of memory cell must be periodically refresh in order to retain data.

Regarding claim 5, the prior art of record do not disclose or suggest a fourth circuit configure to receive the multiple interim signal of varying frequencies.

Regarding claim 19, the prior art of record do not disclose or suggest a multiplexer configure to receive the first and second refresh rate signals.

Regarding claim 20, the prior art of record do not disclose or suggest a multiplexer in order to select the final refresh rate signal.

11. Claims 10-12 are allowed.

The following is an examiner's statement of reasons for allowance:

There is no teaching or suggestion in the prior art to: "a second fusing element coupled to the second multiplexer such that the second fusing element selected a final refresh rate signal, the selection occurring after the random access memory device has been assembled into a chip package" as claimed in the independent claim 10.

**Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

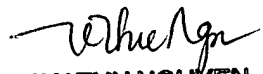
Loffler (US. 6,711,082) disclosed the self-refresh timing signal for generated by an internal self-refresh circuit including a programmable counter driver by an oscillator.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The examiner can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 703.872.9306 for all official communications.

Information regarding the status of an application may be obtained from the Patent-Application-Information-Retrieval-(PAIR)-system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PML  
3 March 2005.

  
**VANTHU NGUYEN**  
**PRIMARY EXAMINER**